

CAST INTEGRAL RING GEAR AND DIFFERENTIAL CASE

10/18/04

**ABSTRACT OF THE DISCLOSURE**

An apparatus and method of forming a differential assembly is provided that includes the steps of providing a ring gear, which is preferably produced by a precision forging process. The differential case is cast about a portion of the ring gear to secure the ring gear to the differential case and form the differential assembly. Preferably, the ring gear includes projections that are embedded in the differential case during the casting process to enhance the connection between the ring gear and the differential case. In this manner, the ring gear may be constructed from a forged steel and the differential case may be constructed from ductile iron while eliminating the fasteners of the prior art.